

Curriculum Policy of the Graduate School of Engineering

Master's Program

Degree: Master of Engineering

Department of Architecture

Based on the Kobe University Curriculum Policy, the Department of Architecture of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Advanced Science and Technology, Specific Research and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students' attainment of the high level specialized knowledge of architecture and a broad academic expertise, in addition to the ability to think from an interdisciplinary perspective, courses including planning-related courses, the structure-related courses and the environment-related courses are provided.
 - For students' attainment of the outstanding advanced expertise in architecture and the in-depth academic knowledge of a researcher in this field, courses including Short Seminar and Specific Research are provided.
 - For students' attainment of the ability to explore the social roles expected of architecture and utilize their advanced expertise and abilities to contribute towards the creation of a sustainable society, courses including Seminar Subjects and Professional Practice Subjects are provided.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Department of Architecture (Digital Medical Engineering Creation Course)

Based on the Kobe University Curriculum Policy, the Department of Architecture (Digital Medical Engineering Creation Course) of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Specific Research and other subjects deemed necessary.

2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students' attainment of the ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering, courses in relation to digital medical engineering creation are offered.
 - For students' attainment of high level specialized knowledge of architecture as well as rich academic expertise and the ability to think from an interdisciplinary perspective, courses including planning-related courses, the structure-related courses and environment-related courses are provided.
 - For students' attainment of the outstanding advanced expertise in architecture and the in-depth academic knowledge of a researcher in this field, courses including Short Seminar and Specific Research are provided.
 - For students' attainment of the ability to explore the social roles expected of architecture and to utilize their advanced expertise and abilities to contribute towards the creation of a sustainable society, courses including Seminar Subjects and Professional Practice Subjects are provided.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Doctoral Program

Department of Architecture

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Curriculum Policy, the Department of Architecture of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Specific Research, Theory of Architectural Philosophy, and Philosophy of Western Architecture.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students' attainment of the highly advanced specialist knowledge of architecture as well as a rich academic expertise and the ability to think from an interdisciplinary perspective, courses including Exercise in Practical Data Science A and PBL Exercises in Data Science (contest type) are provided.

- For students' attainment of outstanding advanced expertise in architecture and the in-depth academic knowledge of a researcher in this field, courses including planning-related courses, the structure-related courses and the environment-related courses are provided.
- For students' attainment of the engineering perspectives and architectural background required to succeed as a self-reliant researcher, Specific Research is offered to assist them in acquiring in-depth academic knowledge necessary for researchers in this field, and guidance is given on their doctoral dissertations.
- For students' attainment of the ability to explore the social roles expected of architecture and to utilize their advanced expertise and abilities to contribute towards the creation of a sustainable society, courses including Planning Theory of Dwelling Space and Planning Theory of Built Environment are provided.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Courses are designed to develop students' ability to pioneer a cutting-edge area of architectural studies based on internationally-aware advanced expertise, as students engage in the courses offered in each domain (architectural planning, building structure and environmental engineering) as well as Short Seminar courses.

During their studies at the university, students continually receive individual tutorials on their independent studies. An annual interim research colloquium is held in which study outcomes are presented to an audience. Upon writing up their dissertations, students take part in a research presentation, where their studies are submitted for the degree assessment prior to the thesis defense.

Degree: Doctor of Philosophy

Based on the Kobe University Curriculum Policy, the Department of Architecture of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Specific Research, Theory of Architectural Philosophy, and Philosophy of Western Architecture.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students' attainment of highly advanced specialist knowledge of architecture as well as rich academic expertise and the ability to think from an interdisciplinary perspective,

courses including Exercise in Practical Data Science A and PBL Exercises in Data Science (contest type) are provided.

- For students' attainment of the outstanding and excellent advanced expertise in architecture and rich academic knowledge of a researcher in this field, courses including the planning-related courses, the structure-related courses and the environment-related courses are provided.
- For students' attainment of the architectural background and abilities in interdisciplinary academia required to succeed as a self-reliant researcher, "Specific Research" is offered to assist them in acquiring this in-depth academic knowledge, and guidance is given on their doctoral dissertations.
- For students' attainment of the ability to explore the social roles expected of architecture and to utilize their advanced expertise and abilities to contribute towards the creation of a sustainable society, courses including Planning Theory of Dwelling Spaces and Planning Theory of Built Environments are provided.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Programs are designed to develop students' ability to pioneer a cutting-edge area of architectural studies based on internationally-aware advanced expertise, as students engage in the courses offered in each domain (architectural planning, building structure and environmental engineering) as well as Short Seminar courses.

During their studies at the university, students continually receive individual tutorials on their independent studies. An annual interim research colloquium is held in which study outcomes are presented to an audience. Upon writing up their dissertations, students take part in a research presentation, where their studies are submitted for the degree assessment prior to the thesis defense.

Master's Program

Degree: Master of Engineering

Department of Civil Engineering

Based on the Kobe University Curriculum Policy, the Department of Civil Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of “humanity”, “creativity” and “international awareness”*, courses are offered including Advanced Science and Technology, English for Civil Engineering and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students’ attainment of advanced specialist competence, courses such as Computational Mechanics I are offered.
 - For students’ attainment of advanced practical expertise backed by diverse interdisciplinary perspectives and specialist knowledge, which covers traditional civil engineering, courses such as Hydraulic System of River Basins are offered.
 - For students’ attainment of practical abilities such as utilizing cutting-edge technologies and solving unfamiliar challenges, courses such as Environmental Limnology are offered.
 - For students’ attainment of the ability to address challenges in a comprehensive manner, guidance on master’s thesis is offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Department of Civil Engineering (Digital Medical Engineering Creation Course)

Based on the Kobe University Curriculum Policy, the Department of Civil Engineering (Digital Medical Engineering Creation Course) of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of “humanity”, “creativity” and “international awareness”*, courses are offered including English for Civil Engineering and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students’ attainment of the ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering, courses in relation to digital medical engineering creation are offered.
 - For students’ attainment of advanced specialist competence, courses such as Computational Mechanics I are offered.
 - For students’ attainment of advanced practical expertise backed by diverse interdisciplinary perspectives and specialist knowledge, which covers traditional civil engineering, courses

such as Hydraulic System of River Basins are offered.

- For students' attainment of the practical abilities for solving unfamiliar challenges, courses such as Environmental Limnology are offered.
- For students' attainment of the ability to address challenges in a comprehensive manner, guidance on master's thesis is offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Doctoral Program

Department of Civil Engineering

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Curriculum Policy, the Department of Civil Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered that are mainly based on an engineering perspective, including Specific Research.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students' attainment of advanced specialist competence, courses such as Design of Soil Structures and Foundations are offered.
 - For students' attainment of advanced practical expertise backed by diverse interdisciplinary perspectives and specialist knowledge, which cover the area of traditional civil engineering, courses such as Instability and Stabilization of Cut, Filled and Reclaimed land are offered.
 - For students' ability to apply advanced technology and attainment of practical abilities for solving unfamiliar challenges, courses such as Geophysical Fluid Dynamics are offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

In addition to the regular supervision on independent studies provided by supervisors, the

Graduate School's common curricula include interim presentations during the first and second years, where guidance is given to students on their preparation of doctoral dissertations. During the third year, a research outcome presentation is held prior to the application for a thesis examination, providing students with comprehensive guidance on their thesis preparation. In this way, the curricula systematically develop students' ability to become internationally-competent researchers possessing rich academic knowledge and advanced expertise in engineering.

Degree: Doctor of Philosophy

Based on the Kobe University Curriculum Policy, the Department of Civil Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered that are mainly based on an interdisciplinary perspective, including Specific Research.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students' attainment of advanced specialist competence, courses such as Design of Soil Structures and Foundations are offered.
 - For students' attainment of advanced practical expertise backed by diverse interdisciplinary perspectives and specialist knowledge, which cover the area of traditional civil engineering, courses such as Instability and Stabilization of Cut, Filled and Reclaimed land are offered.
 - For students' ability to apply advanced technology and attainment of practical abilities for solving unfamiliar challenges, courses such as Geophysical Fluid Dynamics are offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

In addition to the regular supervision on independent studies provided by supervisors, the Graduate School's common curricula include interim presentations during the first and second years, where guidance is given to students on their preparation of doctoral dissertations. During the third year, a research outcome presentation is held before the application for a thesis examination, providing students with comprehensive guidance on their thesis preparation. In this way, the curricula systematically develop students' ability to become internationally-competent researchers possessing rich academic knowledge and advanced expertise in interdisciplinary

academia.

Master's Program

Degree: Master of Engineering

Department of Electrical and Electronic Engineering

Based on the Kobe University Curriculum Policy, the Department of Electrical and Electronic Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Advanced Science and Technology, Specific Research and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students' attainment of rich academic expertise and ability to think from an interdisciplinary perspective, Advanced Science and Technology, Advanced Applied Math, Basics of Intellectual Property Right and Special Lectures are offered.
 - For students' attainment of advanced knowledge and expertise in the field of physical electronics, courses in relation to physical electronics are offered.
 - For students' attainment of advanced knowledge and expertise in the field of computer and information engineering, courses in relation to computer and information engineering are offered.
 - For students' attainment of the ability to apply advanced technology and to apply knowledge of electrical and electronic engineering to creative thinking and accomplish challenges, courses on Specific Research and Advanced Electrical and Electronics Seminar are offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Department of Electrical and Electronic Engineering (Digital Medical Engineering Creation Course)

Based on the Kobe University Curriculum Policy, the Department of Electrical and Electronic Engineering (Digital Medical Engineering Creation Course) of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of “humanity”, “creativity” and “international awareness”*, courses are offered in relation to digital medical engineering creation, including Specific Research and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students’ attainment of the ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering , courses in related to digital medical engineering creation and Special Lectures are offered.
 - For students’ attainment of advanced knowledge and expertise in the field of physical electronics, courses related to physical electronics are offered.
 - For students’ attainment of advanced knowledge and expertise in the field of computer and information engineering, courses related to computer and information engineering are offered.
 - For students’ attainment of the ability to apply knowledge of electrical and electronic engineering to creative thinking and accomplish challenges, courses on Specific Research and Advanced Electrical and Electronics Seminar are offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Doctoral Program

Department of Electrical and Electronic Engineering

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Curriculum Policy, the Department of Electrical and Electronic Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of “humanity”, “creativity” and “international awareness”*, courses such as Specific Research are offered.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students’ attainment of in-depth academic expertise and the ability to think from an interdisciplinary perspective, courses such as Exercise in Practical Data Science are offered.
 - For students’ attainment of the latest knowledge of the field of physical electronics and the

ability to apply it, courses in relation to physical electronics are offered.

- For students' attainment of the latest knowledge of the field of computer and information engineering and the ability to apply it, courses in relation to computer and information engineering are offered.
- For students' attainment of the ability to identify challenges from a variety of perspectives and address them through creative thinking, Specific Research is offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

In addition to the regular supervision on independent studies provided by supervisors, the Graduate School's common curricula include interim presentations during the first and second years, where guidance is given to students on their preparation of doctoral dissertations. During the third year, a research outcome presentation is held before the application for a thesis examination, providing students with comprehensive guidance on their thesis preparation. In this way, the curricula systematically develop students' ability to become internationally-competent researchers possessing rich academic knowledge and advanced expertise in engineering.

Degree: Doctor of Philosophy

Based on the Kobe University Curriculum Policy, the Department of Electrical and Electronic Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses such as Specific Research are offered.
2. The following specialist courses are offered to allow students to develop their expertise through immersing in the in-depth immersion in academic knowledge.
 - For students' attainment of in-depth academic expertise and ability to adopt an interdisciplinary perspective in thinking, courses such as Exercise in Practical Data Science are offered.
 - For students' attainment of the latest knowledge of the field of physical electronics and the ability to apply it, courses in relation to physical electronics are offered.
 - For students' attainment of the latest knowledge of the field of computer and information engineering and the ability to apply it, courses in relation to computer and information engineering are offered.

- For students' attainment of the ability to identify challenges from a variety of perspectives and address them through creative thinking, Specific Research is offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

In addition to the regular supervision on independent studies provided by supervisors, the Graduate School's common curricula include interim presentations during the first and second years, where guidance is given to students on their preparation of doctoral dissertations. During the third year, a research outcome presentation is held before the application for a thesis examination, providing students with comprehensive guidance on their thesis preparation. In this way, the curricula systematically develop students' ability to become internationally-competent researchers possessing rich academic knowledge and advanced expertise in interdisciplinary academia.

Master's Program

Degree: Master of Engineering

Department of Mechanical Engineering

Based on the Kobe University Graduate School Curriculum Policy, the Department of Mechanical Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Advanced Science and Technology, Special Lecture, Special Lecture in English, Advanced Mechanical Engineering Seminar, Specific Research and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their advanced expertise with refinement and excellence through in-depth immersion in academic knowledge.
 - For students' attainment of international awareness, rich knowledge and experience as well as advanced academic competence, Advanced Mechanical Engineering Seminar, English for Science and Engineering, Advanced Applied Math, Basics of Intellectual Property Right and Special Lectures are offered.
 - For students' attainment of in-depth knowledge of the fields of thermo-fluid dynamics and the ability to pursue high-level specialist vocations, a group of specialist courses in

mechanical engineering (category: thermo-fluid dynamics) are offered.

- For students' attainment of in-depth knowledge of the fields of material physics and ability to pursue high-level specialist vocations, a group of specialist courses in mechanical engineering (category: material physics) are offered.
- For students' attainment of in-depth knowledge of the fields of mechanical control and the ability to pursue high-level specialist vocations, a group of specialist courses in mechanical engineering (category: mechanical control) are offered.
- For students' attainment of in-depth knowledge of the fields of mechanical design and manufacturing and the ability to pursue high-level specialist vocations, a group of specialist courses in mechanical engineering (category: design and manufacturing) are offered.
- For students' attainment of advanced competence with refinement and excellence in research and development as a mechanical engineer with specialist expertise, Internship and Specific Research are offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Department of Mechanical Engineering (Digital Medical Engineering Creation Course)

Based on the Kobe University Curriculum Policy, the Department of Mechanical Engineering (Digital Medical Engineering Creation Course) of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered in relation to digital medical engineering creation, including, Special Lecture, Special Lecture in English, Advanced Mechanical Engineering Seminar, Specific Research and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their advanced expertise with refinement and excellence through in-depth immersion in academic knowledge.
 - For students' attainment of the ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering, courses in relation to digital medical engineering creation are offered.
 - For students' attainment of international awareness, rich knowledge and experience as well as advanced academic competence, Advanced Mechanical Engineering Seminar, English

for Science and Engineering, Advanced Applied Math, Basics of Intellectual Property Rights and Special Lectures are offered.

- For students' attainment of in-depth knowledge of the fields of thermo-fluid dynamics and the ability to pursue high-level specialist vocations, a group of specialist courses in mechanical engineering (category: thermo-fluid dynamics) are offered.
- For students' attainment of in-depth knowledge of the fields of material physics and the ability to pursue high-level specialist vocations, a group of specialist courses in mechanical engineering (category: material physics) are offered.
- For students' attainment of in-depth knowledge of the fields of mechanical control and the ability to pursue high-level specialist vocations, a group of specialist courses in mechanical engineering (category: mechanical control) are offered.
- For students' attainment of in-depth knowledge of the fields of mechanical design and manufacturing and the ability to pursue high-level specialist vocations, a group of specialist courses in mechanical engineering (category: design and manufacturing) are offered.
- For students' attainment of advanced competence with refinement and excellence in research and development as a mechanical engineer with specialist expertise, Internship and Specific Research are offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Doctoral Program

Department of Mechanical Engineering

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Graduate School Curriculum Policy, the Department of Mechanical Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Specific Research and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their advanced expertise with refinement and excellence through in-depth immersion in academic knowledge.

- For students' attainment of advanced competence in research based on in-depth knowledge of the fields of thermo-fluid dynamics, a group of specialist courses in mechanical engineering (category: thermo-fluid dynamics) are offered.
- For students' attainment of advanced competence in research based on in-depth knowledge of the fields of material physics, a group of specialist courses in mechanical engineering (category: material physics) are offered.
- For students' attainment of advanced competence in research based on in-depth knowledge of the fields of mechanical control, a group of specialist courses in mechanical engineering (category: mechanical control) are offered.
- For students' attainment of advanced competence in research based on in-depth knowledge of the fields of mechanical design and manufacturing, a group of specialist courses in mechanical engineering (category: design and manufacturing) are offered.
- For students' attainment of advanced competence in research to enable them to handle diverse study areas as a self-reliant researcher, Specific Research is offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

In addition to the regular supervision on independent studies provided by supervisors, the Graduate School's common curricula include interim presentations during the first and second years, where guidance is given to students on their preparation of doctoral dissertations. In the third year, a research outcome presentation is organized before the application for thesis examination, providing students with comprehensive guidance on their thesis preparation. The above curricula aim to give students the opportunity to attain the abilities required of researchers with in-depth knowledge of engineering and advanced expertise as well as international awareness, in a structural manner.

Degree: Doctor of Philosophy

Based on the Kobe University Graduate School Curriculum Policy, the Department of Mechanical Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Specific Research and other subjects deemed necessary.

2. The following specialist courses are offered to allow students to develop their advanced expertise with refinement and excellence through in-depth immersion in academic knowledge.

- For students' attainment of advanced competence in research based on in-depth knowledge of the fields of thermo-fluid dynamics, a group of specialist courses in mechanical engineering (category: thermo-fluid dynamics) are offered.
- For students' attainment of advanced competence in research based on in-depth knowledge of the fields of material physics, a group of specialist courses in mechanical engineering (category: material physics) are offered.
- For students' attainment of advanced competence in research based on in-depth knowledge of the fields of mechanical control, a group of specialist courses in mechanical engineering (category: mechanical control) are offered.
- For students' attainment of advanced competence in research based on in-depth knowledge of the fields of mechanical design and manufacturing, a group of specialist courses in mechanical engineering (category: design and manufacturing) are offered.
- For students' attainment of advanced competence in research to enable them to handle diverse study areas as a self-reliant researcher, Specific Research is offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

In addition to the regular supervision on independent studies provided by supervisors, the Graduate School's common curricula include interim presentations during the first and second years, where guidance is given to students on their preparation of doctoral dissertations. In the third year, a research outcome presentation is organized before the application for thesis examination, providing students with comprehensive guidance on their thesis preparation. The above curricula aim to give students the opportunity to attain the abilities required of researchers with in-depth knowledge of interdisciplinary academia and advanced expertise as well as international awareness, in a structural manner.

Master's Program

Degree: Master of Engineering

Department of Chemical Science and Engineering

Based on the Kobe University Curriculum Policy, the Department of Chemical Science and

Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of “humanity”, “creativity” and “international awareness”*, courses are offered including Advanced Science and Technology, Practical English in Chemical Science and Engineering and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students’ attainment of rich academic expertise in engineering and ability to think from international perspectives, Advanced Science and Technology, Advanced Applied Math I-IV, Basics of Intellectual Property Right, a series of Special Lectures and courses from affiliate graduate schools are offered.
 - For students’ attainment of rich knowledge and advanced expertise in the areas of chemical science and engineering, a group of courses on materials chemistry and on chemical engineering are offered.
 - For students’ attainment of competence in advanced research to discuss and address social challenges using the knowledge and expertise in chemical science and engineering, independent studies are pursued by students, and courses of Project Research are offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Department of Chemical Science and Engineering (Digital Medical Engineering Creation Course)

Based on the Kobe University Curriculum Policy, the Department of Chemical Science and Engineering (Digital Medical Engineering Creation Course) of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of “humanity”, “creativity” and “international awareness”*, courses are offered in relation to health, welfare and medical engineering, including Practical English in Chemical science and engineering and other subjects deemed necessary.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students’ attainment of the ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering , courses in

relation to digital medical engineering creation, a series of Special Lectures and courses from affiliate graduate schools are offered.

- For students' attainment of rich knowledge and advanced expertise in the areas of chemical science and engineering, a group of courses on materials chemistry and on chemical engineering are offered.
- For students' attainment of competence in advanced research to discuss and address social challenges using the knowledge and expertise in chemical science and engineering as well as health, welfare and medical engineering, independent study is pursued by students, and courses on Project Research are offered.

Furthermore, these courses are often combined with active learning or experience-based learning in the form of lectures, practical learning, practical training or other classroom formats.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Doctoral Program

Department of Chemical Science and Engineering

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Curriculum Policy, the Department of Chemical Science and Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Exercise in Practical Data Science and Specific Research.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students' attainment of rich, in-depth academic knowledge of engineering and ability to think from international perspectives, courses from affiliate graduate schools are offered.
 - For students' attainment of rich knowledge and more advanced expertise in chemical science and engineering, a group of courses on applied chemistry and on chemical engineering are offered.
 - For students' attainment of excellent competence in research to identify and address social challenges using the knowledge and expertise in chemical science and engineering, courses on Specific Research are offered.
 - For students' attainment of the ability to succeed as a self-reliant researcher in engineering based on expertise in chemical science and engineering, independent studies will be

pursued.

These programs are arranged to incorporate elements of active learning, participatory learning, and so on, depending on the style of program delivery, such as lectures and laboratory courses. In addition to the regular supervision on independent studies provided by supervisors, the Graduate School's common curricula include interim presentations during the first and second years, where guidance is given to students on their preparation of doctoral dissertations. During the third year, a research outcome presentation is held before the application for a thesis examination, providing students with comprehensive guidance on their thesis preparation. In this way, the curricula systematically develop students' ability to become internationally-competent researchers possessing rich academic knowledge and advanced expertise in engineering.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.

Degree: Doctor of Philosophy

Based on the Kobe University Curriculum Policy, the Department of Chemical Science and Engineering of the Graduate School of Engineering adopts the following policies in organizing its curricula.

1. In order to impress upon students *a sense of "humanity", "creativity" and "international awareness"*, courses are offered including Exercise in Practical Data Science and Specific Research.
2. The following specialist courses are offered to allow students to develop their expertise through in-depth immersion in academic knowledge.
 - For students' attainment of rich, in-depth academic knowledge of engineering and the ability to think from an international perspective, courses provided by affiliate graduate schools are offered.
 - For students' attainment of in-depth knowledge and more advanced expertise in chemical science and engineering, a group of courses on applied chemistry and on chemical engineering are offered.
 - For students' attainment of excellent competence in research to identify and address social challenges using the knowledge and expertise in chemical science and engineering, courses on Specific Research are offered.
 - For students' attainment of the ability to succeed as a self-reliant researcher in interdisciplinary contexts based on expertise in chemical science and engineering, independent studies will be pursued.

These programs are arranged to incorporate elements of active learning, participatory learning, and so on, depending on the style of program delivery such as lectures and laboratory courses. In addition to the regular supervision on independent studies provided by supervisors, the Graduate School's common curricula include interim presentations during the first and second years, where guidance is given to students on their preparation of doctoral dissertations. During the third year, a research outcome presentation is held before the application for a thesis examination, providing students with comprehensive guidance on their thesis preparation. In this way, the curricula systematically develop students' ability to become internationally-competent researchers possessing rich academic knowledge and advanced expertise in engineering.

Learning outcomes are evaluated via multiple comprehensive methods according to the learning objectives.